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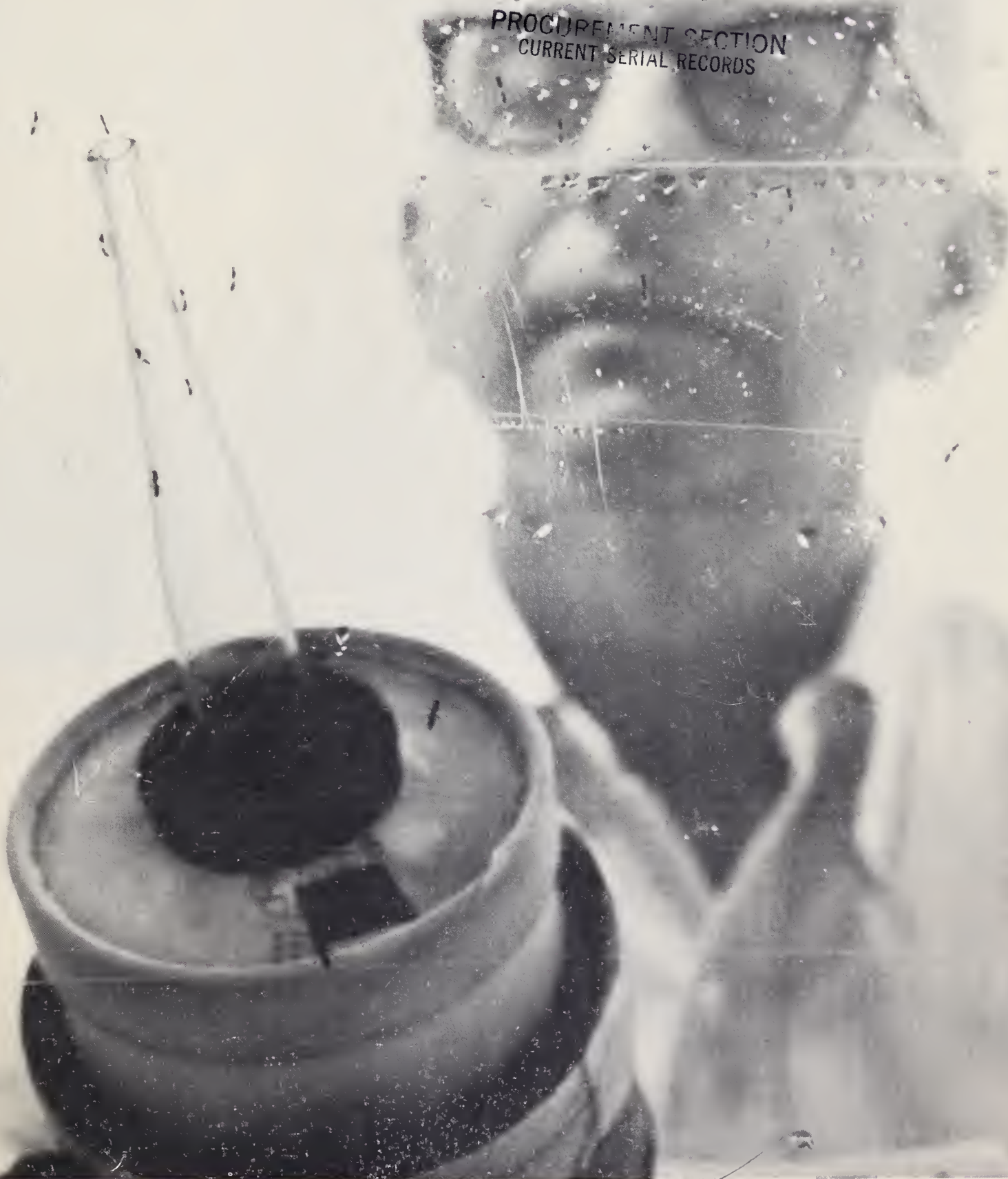
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WASPS WAGE WAR ON ALFALFA WEEVILS

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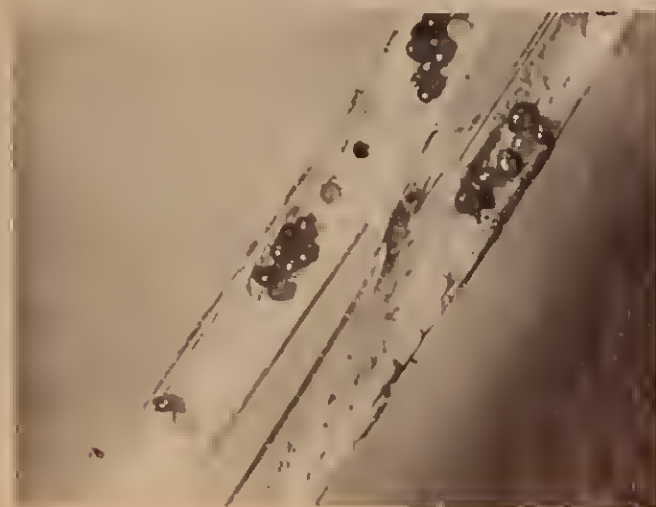
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ON THE COVER: An entomologist at a quarantine room in the Moorestown, N.J., rearing facility uses suction device to sort and remove undesirable strains of the wasps to insure pure cultures for shipment or release. (0770C677-18). ABOVE: A wasp, Microctonus aethiops, maneuvers into position to deposit its eggs into an adult alfalfa weevil (0770C677-2). BELOW: Wasps are able to seek out hidden weevil eggs revealed in this sliced alfalfa stem at the Moorestown facility (0770C677-6).

RIGHT: Sweepnets are used in test areas of badly overgrown alfalfa to gather insects (0770C677-33 and 0770C677-31) which are examined to determine the effectiveness of the wasps (0770C677-27).



Wasps--varieties harmless to man and other living things--are proving to be a great weapon against the alfalfa weevil, entomologists in USDA's Agricultural Research Service report.

Imported from Europe over the past few years, the wasps have made significant inroads into the alfalfa weevil population in a 155,000 acre test area in New Jersey and Pennsylvania, achieving a 90 percent reduction in the pest in the past three years. This has led to a reduced need for chemical insecticides, for in many parts of the test area damage caused by the diminishing weevil population amounts to less than the cost of spraying.

Wasps from different parts of the world, destined for use as breeding stock, are ship-

ped to Moorestown, N.J., where USDA operates a rearing facility in cooperation with the New Jersey Department of Agriculture. From there wasps are released in fields in the test area, where frequent surveillance indicates their effectiveness.

Several species of tiny wasps, adapted to varying climates, are being used, but they are all parasites, feeding on the weevil at some stage in its life cycle. Some lay their eggs in weevil egg masses. Upon hatching, wasp larvae eat the weevil eggs.

Prospects are encouraging for eventual control of the weevil in most alfalfa-growing areas of the United States through this biological method.



RIGHT: Sweepnets are used in test areas of badly overgrown alfalfa to gather insects (0770C677-33 and 0770C677-31) which are examined to determine the effectiveness of the wasps (0770C677-27).

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An entomologist checks the progress of weevils and wasps in one of the rearing chambers at the Moorestown facility (0770C677-8).

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